THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LOUIS R. ROSS and EDWARD L. WILSON

Appeal No. 95-0432
Application 08/002,448[1]

ON BRIEF

Before GRON, OWENS, and WALTZ, Administrative Patent Judges.

GRON, Administrative Patent Judge.

DECISION ON APPEAL UNDER 35 U.S.C. § 134

This is an appeal under 35 U.S.C. § 134 from an

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[1] Application for patent filed January 8, 1993. According to applicants, this application is a continuation-in-part of Application 07/734,001, filed July 22, 1991, abandoned.

examiner's rejection of Claims 1 and 3-11, all claims pending in this application.

Introduction

Claims 1 and 3-11 stand rejected under 35 U.S.C. § 103 as being unpatentable in view of the combined teachings of European Patent Application 335,406 (Atkins), published October 4, 1989, and Godlewski, U.S. 4,703,082, patented October 27, 1987.

Representative Claim 1 reads:

> 1. A four component resinous system for a sheet molding composition comprising:
> (a) an unsaturated polyester comprising a polycondensation product of one or more dihydric alcohols and one or more ethylenically unsaturated polycarboxylic acids;
> (b) one or more low-profile thermoplastic polymers which cause phase separation and porosity during a curing reaction;
> (c) one or more olefinically unsaturated monomers which copolymerizes [sic] with the unsaturated polyester; and,
> (d) one or more polysiloxane components which are compatible with the reacted unsaturated polyester and monomer during cure wherein the compatible components are polysiloxane polyalkyl copolymers represented by the formula

wherein each R, which can be the same or different, is an alkyl group containing 1 to 20 carbon atoms, X [sic, "x"] is an integer ranging from 1 to 10 and y is an integer ranging from 1 to 10.

Discussion

1. Burden of proof

In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), instructs at 1074, 5 USPQ2d at 1598:

> . . . . The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. *See In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-87 [sic, 88] (Fed. Cir. 1984). It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.

2. Prior art teaching

A. Atkins

Atkins describes (Atkins, p. 3, l. 19-42):

> I. A molding additive composition comprising a mixture of a low profile additive and a surfactant additive containing a silicon-oxyalkylene copolymer flow control agent and surface modifying agent. This composition may include

A. A crosslinking monomer, which embraces, for example, an olefinically unsaturated compound such as an olefinically unsaturated hydrocarbon. Illustrative of such compound is styrene.

B. A silicon-oxyalkylene copolymer which contains

1. at least one silicon per molecule,

2. at least 2 alkylene oxide moieties in a sequence per molecule, and

3. the alkylene oxides are bonded to silicon in the molecule through a carbon to silicon bond.

C. A low profile additive which is a thermoplastic polymer having a molecular weight greater than that of the silicon-oxyalkylene copolymer.

II. A molding composition comprising

A. a polyester molding resin,

B. a low profile additive, and

C. a silicon-oxyalkylene copolymer flow control agent and surface modifying agent which may contain a functional group reactive with the polyester molding resin, such as an olefinic unsaturation.

The molding composition may include a crosslinking monomer.

III. A fiber reinforced molding composition comprising

A. a thermosetting molding resin, preferably,

an unsaturated polyester resin,

B. a cross-linking monomer,

C. a low profile additive,

D. a reinforcing fiber, and

E. a silicon-oxyalkylene copolymer flow control agent and surface modifying agent.

Atkins lists the advantages of his inventive molding composition as follows (Atkins, p. 3, l. 50-55):

- improve flow during molding,
- improved physicals for the molded product,
- smoother surfaces for the molded product, i.e., better replication of the mold and the mold's dimensions; and
- molded fiber reinforced plastic parts that have less shrinkage.

We find that the molding composition Atkins describes differs from the molding composition appellants claim in the polysiloxane copolymer component. Appellants' thermoset molding composition requires a polysiloxane polyalkylene copolymer surface modifying agent. Atkins' thermoset molding composition requires a polysiloxane polyalkyleneoxyalkylene surface modifying agent.

B. Godlewski

Godlewski states (col. 3, l. 60, to col. 4, l. 16; emphasis added):

> The present invention provides techniques, methods, and additive combinations which permit the integral blending of additives for filler/polymer composites for the enhancement of physical properties such as impact strength, tensile strength, etc. The present invention provides novel methods for reinforcing thermoplastic organic polymers such as polyethylene and polypropylene by blending the polymer, a finely divided filler and a surfactant which is a siloxane-polyoxyalkylene block copolymer or a siloxane containing at least one silicone bonded alkyl group of 12 or more carbon atoms or a polyoxyalkylene compound containing polyoxyalkylene blocks terminated at one end by an alkyl group having 12 or more carbon atoms or an alkenyl group and terminated at the other end by an alkoxy group or a hydroxy group. According to this invention, the novel method also includes the incorporation of an unsaturated silicon compound containing at least one polymerizable unsaturated group, at least one /SiO-group and not more than 5 silicon atoms, e.g. a polymerizable unsaturated hydrolyzable silane coupling agent and/or an unsaturated organic compound containing two or more polymerizable unsaturated groups into the filler/-polymer mixture to provide synergistic enhancement of the filled polymer physical properties.

The surfactants Godlewski prefers are polysiloxane-polyalkyleneoxyalkylene block copolymers (col. 6, l. 38-39). Nevertheless, Godlewski teaches that polysiloxane-polyalkylene block copolymer surfactants, i.e., siloxanes containing at least one silicon bonded alkyl group of 12 or more carbon atoms, are useful in the invention (col. 5, l. 31-45). At column 6, line 57, to column 7, line 13, Godlewski lists polymeric

matrices to which this invention may be applied. Included in the long list of polymeric matrices are "polyester resins including alkyd resins" (col. 7, l. 9). Godlewski states (col. 7, l. 13-16):

> Preferred polymers are the thermoplastic polymers, such as the polyolefins, e.g., polyethylene, polypropylene, and the like. The invention can be used in thermoset resins.

Considering Godlewski's disclosure as a whole, including the examples on pages 13-26, we find therein a marked preference for polysiloxane-polyalkyleneoxyalkylenes as the surfactant and evidence of their utility in polymeric matrices limited to their utility in thermoplastic polymers. In the invention Godlewski claims, the surfactants included need only be useful "for improving the physical properties of thermoplastic organic polymer filled with inorganic fillers" (Godlewski's Claims 1 and 7).

3. Weighing the evidence

The examiner concluded that persons having ordinary skill in the art would have been led by Godlewski's teaching to replace the polysiloxane-polyalkyleneoxyalkylene surfactant

which improves Atkins' fiber-reinforced thermoset molding compositions with a nonpreferred polysiloxane-polyalkyene surfactant Godlewski (1) shows is useful instead of preferred polysiloxane-polyalkyleneoxyalkylene surfactants in filled thermoplastic polymers and (2) alleges "can be used" in thermoset resins, e.g., polyester resins including alkyd resins, for an entirely different benefit than those benefits indicated solely in appellants' disclosure. Having considered all the evidence, aleegations, and arguments of record, we conclude, contrary to the examiner's view, that the greater weight favors patentability over the combined prior art teachings of Atkins and Godlewski. We grant more weight than did the examiner to Godlewski's express preference for and evidence exclusively of improvements in filled thermoplastic resins. We also grant considerably more weight to Godlewski's preference for polysiloxane-polyalkyleneoxyalkylene surfactants. With the weight of that evidence before a person having ordinary skill in the art, we ask why persons having ordinary skill in the art would have been led by Godlewski's statement that "[t]he invention can be used in thermoset resins" (col. 7, l. 15-16) to replace a surfactant Atkins found useful

to improve the flow and smooth the surface of thermoset polyester molding compositions with a surfactant Godlewski found comparatively nonpreferred thereto for use in filled resins, most especially thermoplastic resins, for improving their impact resistance and tensile strength. In view of the combined prior art teachings, we find no motivation for persons having ordinary skill in the art to make the proposed substitution. Rather, it is our view that the examiner's holding of unpatentablity of the subject matter claimed in this case is based more on the hindsight of appellants' disclosure than on the combined teachings of Atkins and Godlewski. We remind the examiner that references must be considered not only for what they expressly teach, but also for what they fairly suggest. In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979).

Conclusion

We reverse the examiner's rejection of Claims 1 and 3-11 under 35 U.S.C. § 103 as being unpatentable in view of the combined teachings of European Patent Application 335,406 and Godlewski.

REVERSED

Teddy S. Gron Administrative Patent Judge	)	
Terry J. Owens Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Thomas A. Waltz Administrative Patent Judge	)	

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